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SOLITARY RETICULOHISTIOCYTIC GRANULOMA*

ROBERT JACKSON, M.D.†

RETICULOHISTIOCYTIC GRANULOMA is a rare type of skin tumour, only clearly defined in the last ten years.[1-5] Clinically it may present as single or multiple nodules, varying in size from a few millimetres to a few centimetres. It may be flesh-coloured, yellow or red, and of soft to hard consistency. This tumour may occur anywhere on the body. The correct diagnosis is seldom made before biopsy.

The multiple form has been reported in association with rheumatoid arthritis, frequently severe and disabling; xanthelasma; hypercholesterolæmia; and the involvement of synovial membranes.

In a recent review of this subject Johnson and Tilden[2] state that only 41 cases of solitary tumours have been reported to date. Because of its rarity, this case is being reported.

CLINICAL FINDINGS

Mr. J.C.W., aged 46, a farmer, consulted his family physician‡ on February 4, 1956, for a nodule on the antero-medial superior aspect of his right forearm. Its duration was unknown. There was no history of trauma. When I saw the patient on February 13, 1956, the biopsy site was healing well. Complete examination of skin and mucous membranes revealed a senile angioma on the right chest, a verruca on his left index finger and a remote scar on his left lower leg. No other skin tumours were present. There was no adenopathy. Examination at time of writing (November 1957) revealed nothing further.

General medical history and appropriate examinations have revealed that he has a large sliding hiatus hernia with gastro-intestinal symptoms, and occasional frontal headaches of the tension type. There is no history or clinical findings of any type of arthritis.

PATHOLOGICAL FINDINGS

Gross.—The specimen consists of an ellipse of skin measuring 1.6 cm. in length. The central portion of this is covered by a slightly raised, skin-coloured, warty nodule.

Microscopic (Figs. 1 to 5).—The section is of hairy skin, with usual appendageal structures.

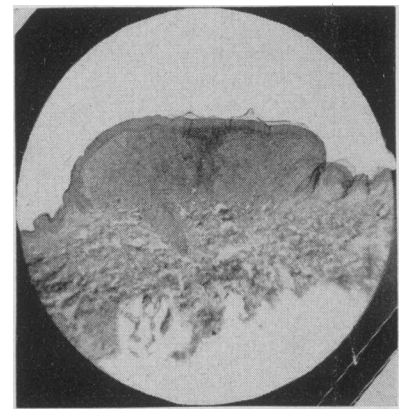

Fig. 1.—Note absence of rete pegs, subepidermal location of tumour, and on the left, one finger-like projection deeper into the corium. Hæmatoxylin and eosin, × 17.

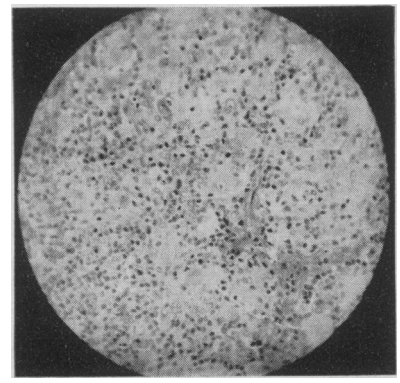

Fig. 2.—Shows inflammatory and large histiocytic-type cells. Hæmatoxylin and eosin, × 205.

The epidermis is intact, showing a thin layer of hyperkeratosis, with minimal melanin deposits in the basal layer. In the centre of the section there is a granulomatous reaction extending from the immediate subepidermal area to the mid-corium. It has a sharply demarcated border, but is not encapsulated, nor is there any surrounding inflammatory cell or tissue reaction. The granuloma is composed of various types of cells. Most prominent are numerous large histiocytic-type cells. They have abundant finely granular eosino-

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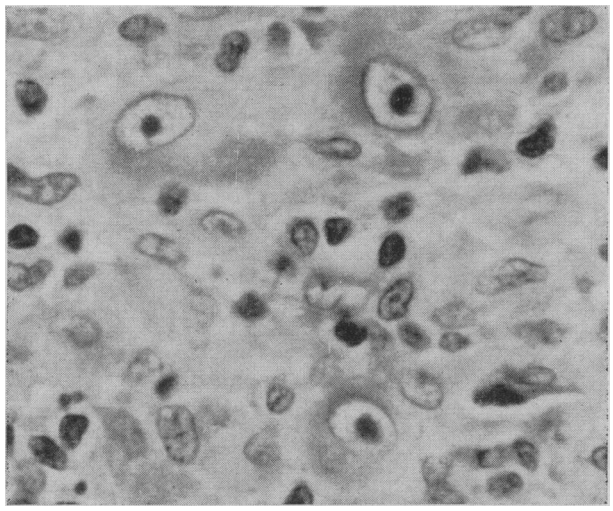

Fig. 3.—Note large histiocytic-type cell with poorly defined borders, prominent nuclear membrane, and vesicular nucleus with large central blob of chromatin. Hæmatoxylin and eosin, × 1200.

philic cytoplasm which is foamy at the periphery of a few cells. The nuclei are large, round or ovoid, with a prominent nuclear membrane. The nucleus contains variable amounts of finely dispersed chromatin and frequently there is a large central blob of chromatin. The cell borders are not clearly demarcated and in some areas the cells appear to form a syncytium. In many areas these histiocytic-type cells form into giant cells. The giant cells contain up to ten nuclei, which, for the most part, are located at the periphery of the cell. No phagocytosis is present. No mitoses are seen. Scattered throughout the granuloma are numerous inflammatory cells. Most are plasma cells and eosinophils. A few fibroblasts and lymphocytes are also present. Numerous small capillary channels are present throughout the lesion. The overlying epidermis shows an absence of rete pegs.

The Prussian-blue reaction of hæmosiderin was negative. French's elastic tissue stain showed no elastic fibres in the granuloma. Staining with the Gordon and Sweets modification of silver reticulum stain showed a dense reticular network throughout the tumour. This reticular network was considerably more dense than that in adjacent normal papillæ. Van Gieson connective tissue stain showed a few scattered thin collagen

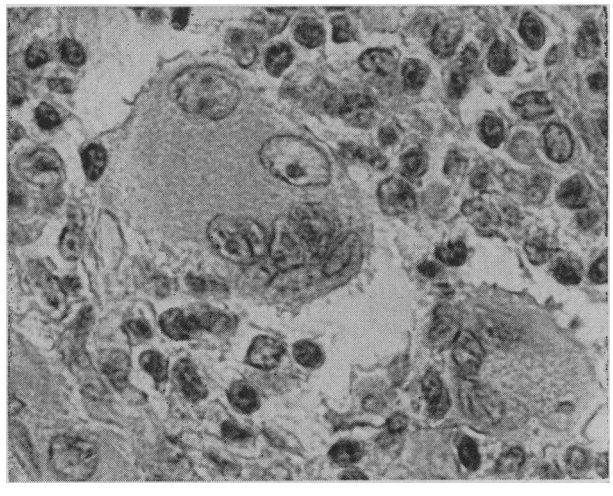

Fig. 4.—Shows two giant cells. Hæmatoxylin, × 1200.

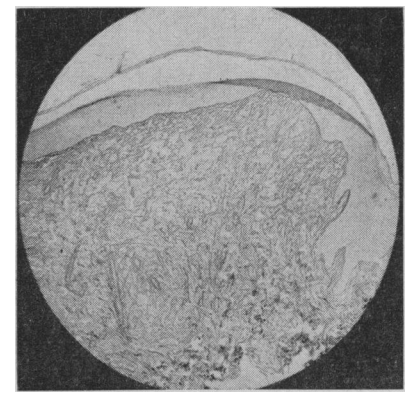

Fig. 5.—Note dense reticulum network. Gordon and Sweets modification of silver reticulum stain, × 49.

fibres, especially at the periphery of the granuloma. Ziehl-Neelsen stain revealed no acid-fast organisms. Oil red O stain on sections from the paraffin block was negative for fat droplets within the granuloma.

COMMENTS

The histopathological findings seen in this case are essentially the same as previously described by others, although the large number of eosinophils is unusual. Histologically, this tumour has been confused with xanthoma, fibrosing xanthoma, nævoxantho-endothelioma, dermatofibroma, and malignant melanoma.

There is some evidence that the multiple variety may be related to other lipoid storage diseases. It has been postulated that the solitary lesion represents a banal localized form of this general condition. A few solitary tumours have been associated with trauma, but the vast majority have not.

SUMMARY

The clinical and histopathological findings in a case of solitary reticulohistiocytic granuloma are presented.

I am indebted to Dr. J. D. Stephen, Pathologist, Regina General Hospital, for his comments and criticisms; and to Mr. H. Wood for the photomicrographs.

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REDUCED RAILWAY FARES

Arrangements have been completed with the Canadian Passenger Association to permit members and their families to obtain reduced railway fares in travelling to and from the meetings of the C.M.A. and/or affiliated medical societies in Halifax, N.S., and St. Andrews, N.B., next June. For details see page 635 of this issue.